

# HERPETOLOGICAL MISCELLANEA

By L. GLAUERT, W.A. Museum, Perth

## I.—NOTES OF SOME FORMS OF *DIPLODACTYLUS*

The recent contribution on the Victorian species of tuberculated *Diplodactylus* by Mr. C. W. Brazenor <sup>(1)</sup> suggested that it might be advisable to examine the extensive Western Australian series preserved in the W.A. Museum. The task has been undertaken at intervals when opportunity offered and has revealed some interesting facts.

### *Diplodactylus spinigerus spinigerus* (Gray) <sup>(2)</sup>

An examination of 43 specimens shows that the lizard exhibits considerable variation. The general colour of this form is greyish with a brownish-grey zigzag vertebral stripe usually marked out by enlarged tubercles which pass into blackish (in life dark purple) soft spines on the tail. The other colour form is a more or less uniform greyish brown. This dark phase may be met with throughout the range of the lizard whereas the light phase is more coastal in distribution although specimens from Cunderdin, Kulin and Mount Magnet are in the collection.

In this form the larger tubercles on the back are generally in a more regular arrangement.

The upper labials vary from 10 in one case to 15 in 10 instances, the great majority numbering 12 (21 cases) and 13 (28 cases). The lower labials range from 10, in one case, to 15 in ten, the majority being 12 (in 24 instances) and 13 (in 22). It is stated that in *spinigerus* the spines over the eyes are absent and in many instances this is the case; when any enlargement takes place it is usually in solid tubercles although now and again small soft spines, blackish in colour have been noticed on some of the dark specimens collected near Perth. The number and shape of the lamellae under the fourth toe are not constant. All but three of the dark form are females.

### *Diplodactylus spinigerus ciliaris* (Blngcr.)

Eleven specimens in the collection represent this form. They have the spines over the eyes developed as shown in Boulenger's figure <sup>(3)</sup>; the enlarged tubercles along the back are similarly arranged, but the upper labials vary from 13 to 15 and the lower ones from 10 (ten series) to 15 (six series). The Museum has material from the Murchison, the Mt. Margaret district and the Canning Stock Route (Yandil Station).

<sup>(1)</sup> Memoirs of the National Museum of Victoria, No. 17, p. 215.

<sup>(2)</sup> The specimen figured on plate XVI of the Reptiles of the "Erebus" and "Terror" Expedition (fig. 5) appears to be an individual with a replacement tail as there are no indications of the double row of spines which are so characteristic.

<sup>(3)</sup> Catalogue of the Lizards in the British Museum (Nat. Hist.), 2nd edn., vol. I, plate VIII, fig. 2.

*Diplodactylus spinigerus aberrans* subsp. nov.

Although the type locality of *D. s. ciliaris* is given as Port Darwin, showing that the sub-species has a very wide range in the north, it was surprising to find that in West Kimberley at La Grange and Wallal, a distinct form had been collected which may be described as follows:—

Snout, 9 mm., rounded, longer than the distance between the eye and the ear opening, nearly twice the diameter of the eye, 5 mm. Eye large, much larger than its distance from the mouth. Ear opening oval, horizontal diameter 2 mm. Body and limbs normal, eight lamellae under the fourth toe, the apical pair broadly heart shaped, next two transverse, slightly emarginate distally, the three or four basal ones divided. Upper surface covered with granules, larger than in *spinigerus* and *ciliaris*, smaller on the sides and below, the enlarged tubercles replaced by small soft spines in two rows from the eyes over the nape to the shoulders, a few tubercles scattered over the back in no definite order. Rostral pentagonal, grooved, not divided; nostril between the rostral first upper labial and three nasals. Thirteen upper and twelve lower labials. Mental slightly larger than the adjacent labials. Lower surface covered with small granules, largest on the abdomen. Tail shorter than the head and body, flattened above, almost quadrangular in section, covered with granules larger than those on the body, two rows of soft curved spines, between which are double series of enlarged granules, extending almost to the tip.

Colour: Indistinctly greyish brown, the spines on the head and neck darker, tail much paler, yellowish. Under surface pale with brownish yellow markings on the chin, indistinct dark markings on the belly and limbs.

Measurements, in millimetres: Total length, 134 (approx.); head to hind margin of ear, 21.5; head width behind the eyes, 16; head and body, 80 (approx.); tail, 84 (approx.); fore limb, 28; hind limb, 36.

This subspecies differs from its relatives essentially in the ornamentation of the tail, there being a number of longitudinal series of enlarged tubercles between the two rows of soft spines. In the other forms the space between these rows of spines is uniformly granular.

Type, R 2803, from Mt. Wynne, West Kimberley, in the W.A. Museum.

I am indebted to Dr. H. W. Parker of the British Museum (Nat. Hist.) who kindly compared a specimen with the type of *D. s. ciliaris* and to Mr. J. R. Kinghorn of the Australian Museum, Sydney who allowed me to examine specimens under his charge which were found to include one from King Sound belonging to this new subspecies.

It will be of interest to record that the donor of one of the specimens in the collection, Mr. H. W. B. Talbot, mentioned that the lizard "squirted out stuff like cobweb from the spines on its tail," a habit which I have observed on one occasion when handling a local *D. s. spinigerus* at Spearwood some years ago.

*Diplodactylus strophurus* (Dum. & Bibr.)

Four specimens of *Diplodactylus* in the Museum collection, R5325 from Carnarvon (the type locality), R2607 from Milly Milly Station and R5923 from Mount Narryer Station in the Murchison district, and R6535 from the Yalgoo district agree very closely with Dumeril & Bibron's description and figure of this species (<sup>1</sup>). The blunt enlarged tubercles are scattered more or less irregularly over the back and sides, not in longitudinal rows and the tail bears transverse rows of tubercles and several rows of small granules on each segment. There are a few enlarged tubercles over the eye but nowhere are there traces of the soft spines so characteristic of *D. spinigerus* and its forms.

The coloration is uniform above with no indications of the darker lines or blotches on the head and body. Specimens of *D. strophurus* Boulenger (<sup>5</sup>), not of Dumeril and Bibron, from South-eastern Australia, can be readily distinguished from this Western Australian lizard. The *D. intermedius* of Ogilby (<sup>6</sup>), New South Wales, which may be a *spinigerus* with replacement tail, also cannot be confused with *strophurus*.

A number of *spinigerus* and *ciliaris* with replacement tails are present in the collection. When the new growth does not match the remnant the scalation is similar to that found on the back, there being no trace of segmentation or of the rings of enlarged tubercles on each segment so characteristic of *strophurus*. In one example, R1304 from Laverton, the soft spines on the tail are replaced by enlarged tubercles resembling those arranged in two series along the back. The lizard resembles the specimen from Day Dawn figured by F. Werner (<sup>7</sup>) as *D. intermedius* Ogilby.

## II. SOME NEW WESTERN AUSTRALIAN LIZARDS

*Amphibolurus barbatus microlepidotus* subsp. nov.

Two Dragon Lizards received from the Drysdale River Mission in 1922 differ from the typical *A. b. barbatus* of the Eastern States and from *A. b. minor* of more southerly Western Australia to such an extent that they must be regarded as representing a distinct form.

Plates on the head are smaller especially on the snout; the spines of the transverse series on the head between the ears are bluntly pointed, not acute; there are four clusters of spines on the nape behind the transverse series; and the spines of the "beard" are smaller and less acutely pointed. Scales on the back are smaller, and the enlarged keeled ones are arranged in oblique rows from the vertebral area to the lateral series of spines, not scattered irregularly over the surface; prominently keeled, only a few are spinose. Scales on the chin are strongly keeled, mucronate, on the throat faintly so; on the chest with one strong median keel and two weak lateral keels, median keel strongly

(<sup>1</sup>) *Erpetologie generale*, vol. III, p. 397; plate XXXII, fig. 1.

(<sup>5</sup>) *Catalogue of the Lizards in the British Museum* (Nat. Hist.), 2nd edn., vol I, p. 100.

(<sup>6</sup>) *Records Australian Museum*, vol II, p. 10.

(<sup>7</sup>) *Fauna Sudwest Australiens*, II, p. 457.



spinose, lateral keels mucronate. Limbs are feebly keeled, less spinose than in the nominate form.

Colour: Very faded but a dark band from the eye through the ear on the nape, tail with distinct dark rings, the entire under surface pale with indications of dark markings on the chin.

Comparative measurements in millimetres, are as follows:

	<i>A. b. microlepidotus</i> R 591	<i>A. b. barbatus</i> R 592	<i>A. b. minor</i> R 10514	<i>A. b. minor</i> R 42
Total length ... ..	435	431	450	—
Length of head ...	37	34	50	33
Width of head ... ..	27.5	26.5	33.5	23.5
Head and body ... ..	153	143	190	115
Head in head and body ... ..	4.1	4.2	3.8	3.5

The subspecies can be easily distinguished from *A. b. barbatus* and *A. b. minor* by the much smaller scales on the upper surface of the head and body.

Type locality: Drysdale River Mission, North Kimberley; presented by Rev. Father Salinas, July 1922. Types, R 591 and R 592 in the W.A. Museum, Perth.

I wish to express my thanks to Mr. J. R. Kinghorn for assistance and advice in dealing with this interesting form. In a letter Mr. Kinghorn writes: "I think you have something worth noting. I should not hesitate if I were you in giving it a name."

#### *Lygosoma pallidum* Blng.

Specimen R5336, from Carnarvon, closely resembles the description by Boulenger but differs in that the distance from the tip of the snout to the forelimb is 1.4 times the distance from the axilla to the groin; in that the frontal is in contact with two supraoculars only and in the presence of two pairs of nuchals.

The colour in spirits is whitish cream with a number of narrow brown cross bands interrupted in the vertebral region of the body but continuous on the tail. Lower surface whitish. Limbs with faint dark cross bands.

#### *Lygosoma lesueurii concolor* subsp. nov.

Distance from the tip of the snout to the forelimb nearly twice in the distance between the axilla and the groin; snout narrowly rounded; rostral narrowly in contact with the frontonasal; frontonasal broader than long; prefrontals narrowly in contact; frontal large, twice as long as its distance from the tip of the snout, not wider than the supraoculars, its sides straight, longer than the frontoparietals and the interparietal combined; four supraoculars, second the largest, three in contact with the frontal; nine supraciliaries; lower eyelid scaly, parietals in contact behind the interparietal, three pairs of the enlarged nuchals; eight upper labials 6th and 7th under the eye. Ear opening oval, as long as the eye, with four or five lobules.

Body scales smooth, dorsal largest, ventrals somewhat larger than the laterals, 28 round the middle of the body, two enlarged

preanals; tail nearly twice as long as the head and body; dorsal scales not much larger than the laterals, middle row below considerably enlarged. Limbs short, the adpressed limbs fail to meet by the length of the hand, in younger individuals they overlap slightly; 23 lamellae under the fourth toe, the two basal ones considerably enlarged laterally.

Colour, in spirits, above uniform orange citrine (\*), the edges of the scales slightly darker; below whitish.

Measurements (approximate) in millimetres:

	R5049	R5340	R5013
Head and body .....	85	60	61
Tail .....	160	120	imperfect
Fore-limb .....	19	16	15.5
Hind-limb .....	34	27	28
Snout to fore-limb .....	27.5	19	20

The form differs from the nominate race in having shorter limbs and a uniform coloration above.

The type R5049 was collected on Marrila Station, inland from Maud's Landing, by Mr. R. A. Anderson, November 1934. A second, R5340, was found near Carnarvon and a third, R5013, at Boolardy Station, north of Yalgoo.

#### *Lygosoma leonhardii* Sternfeld (\*)

A slender skink, distance from the tip of the snout to the fore-limb about 1.5 times in the distance from the axilla to the groin; nasals separated; frontonasal broader than long, in contact with the rostral and the frontal, which is 1.5 times as long as the frontoparietals and interparietal combined, twice as long as its distance from the tip of the snout, in contact with three anterior supraoculars; four supraoculars; eight supraciliaries, the last the largest; frontoparietals slightly shorter than the interparietal; four pairs of nuchals; eight upper labials, 6th and 7th under the eye. Ear opening about as large as the eye, with three lobules; body scales, 32 smooth scales round the middle laterals smallest, the two vertebral series much the largest. The adpressed hind limb nearly reaches the elbow; toes slender, compressed, keeled, 24 lamellae under the fourth toe.

The coloration, except on the uniform reproduced part of the tail, is close to *L. strauchi* as figured and described by Boulenger (10).

This lizard, which is close to both *L. strauchi* from Queensland, and *L. leonhardii* from Hermannsburg, is considered to belong to the latter Loveridge (11) having shown that it is variable in some of its characters. Measurements: head and body, 67; fore-limb, 13; hind-limb, 35 mm.

The specimen R7069 was collected at Grant's Patch, 30 miles east of Kalgoorlie, by Miss Joy Daniels in 1938.

(\*) Ridgway's Color Standards, plate IV.

(9) Sternfeld, Senckenbergiana, 1919, VI, no. 3, p. 79.

(10) Boulenger, Cat. Liz. B.M. (N.H.), vol. III, 1887, p. 229, plate XII, fig. 3.

(11) Loveridge, Bull. M.C.Z., 1934, vol. 77, no. 6, p. 346.